## REMARKS

Claims 1, 2, 3, 4, 5, 7, 8, 9, 10, 11, 12, 13, 14, 17, 18 and 21 have been amended and new claims 22, 23 and 24 have been added. Claims 1 to 24 are now pending in the application. Re-examination and reconsideration of the application, as amended, are requested.

In the Official Action of June 5, 2001 claims 1 and 7 were rejected under 35 USC 102(e) as being anticipated by Meurisse et al. (U.S. Patent 5,959,973). Reconsideration of this rejection is respectfully requested. Method claim 1 and system claim 7 of the present application are directed to a method and system for adjusting or managing transmission of data traffic through a communication system in which a transmission link having a physical layer transport rate which is subject to variations as a function of time is included. As set out in the application a physical link includes DSL technology in which the transport rate is known to vary due to physical conditions of the xDSL local loop. These physical conditions which may result in a change in transport rate include the actual condition of the loop itself, temperature variations and/or electromagnetic interference. In this regard the Examiner is referred to page 3 beginning at line 5. Meurisse et al. is dealing specifically with the link and network layer transport rates and makes no suggestion of controlling data flow through the physical link wherein the physical link is the subject to variations as a function of time. On the contrary Meurisse specifically states at column 5 beginning line 57 "To simplify the described situation it is supposed that this capacity available on the output link of queuing point Q remains constant." Thus, the rate is constant in Meurisse based on the bandwidth capacity and the rate need be changed only because of congestion at queuing points within the network. This is quiet different from the present invention in which the physical link itself is subject to variation as a function of time. As set out in claims 1 and 7, as amended, data is transported from an upstream source downstream over the transmission link which has a physical layer transport rate which is subject to variation. If the rate changes a management message, which includes the rate information based on the monitored physical layer transport rate, the rate at which the upstream source sends the data traffic is adjusted. In view of the foregoing, Meurisse clearly does not describe each and every element of claims 1 and 7 and, as a consequence, cannot be said to anticipate the claim under 102.

Claims 2 to 5, 8, 9, 11 and 13 stand rejected under 103(a) as being unpatentable over the same reference.

For the reasons set out above as to why claims 1 and 7 are not anticipated by Meurisse it is respectfully submitted that the same claims are patentable over the same reference.

The rejection of claims 6, 10, 14 and 21 under 35 USC 103(a) as being unpatentable over Meurisse in view of Chang et al. (1995 IEEE pages 310 to 315) is also traversed, Chang et al. does not

relate to a transmission link having a physical layer transport rate which is subject to variations as a function of time and as a consequence, does not add to the teachings of Meurisse in order to render the rejected claims obvious. For the same reasons it is submitted that claims 15 to 20 are patentable over Meurisse, Chang and the admitted prior art. None of these references including the admitted prior art refer to the aforementioned transmission link having a physical layer transport rate which is subject to variation as a function of time. In as much as none of these references teach or suggest the combination as now defined in the present claims it is submitted that they are not a proper combination in a finding of obviousness.

In view of the foregoing it is believed that the claims are in condition for allowance. Reconsideration of the rejection is requested. Allowance of claims 1 to 24 at an early date is solicited. The fees for new claims 22, 23 and 24 are submitted herewith.

Attached hereto is a marked-up version of the changes made to the claims by the current amendment. The attached page is captioned "**Version with Markings to Show Changes Made**".

Respectfully submitted,

George M. MacGregor, Reg. No. 37,547
Marks & Clerk
P.O. Box 957, Station B
280 Slater Street, Suite 1800
Ottawa, Ontario, Canada
K1P 5S7

Telephone No.: (613) 236.9561
Facsimile No.: (613) 230-8821

## VERSION WITH MARKINGS TO SHOW CHANGES MADE

### IN THE CLAIMS

Claims 1, 2, 3, 4, 5, 7, 8, 9, 10, 11, 12, 13, 14, 17, 18 and 21 have been amended as follows:

1. (amended) In a communications system for transporting data traffic downstream from ~~a~~ an upstream source ~~end-point to a destination end-point~~ over a path which includes a transmission link having a physical layer transport rate which is subject to variations as a function of time, a method of managing transmission of the data traffic through the system, the method comprising: the steps of: monitoring the physical layer transport rate of said link; sending to said upstream source ~~end-point~~ a management message ~~cell~~ including rate information based on the monitored physical layer transport rate; and adjusting, by said upstream source ~~end-point~~, said transmission rate responsive to the rate information in said management message ~~cell~~.

2. (amended) A method as defined in claim 1 wherein said management message ~~cell~~ is generated in response to a change in said physical layer transport rate.

3. (amended) A method as defined in claim 2 wherein said management message ~~cell~~ is generated when said change in said physical layer transport rate exceeds a threshold value.

4. (amended) A method as defined in claim 3 wherein said management message ~~cell~~ is generated in response to a decrease in physical layer transport rate in excess of a first threshold value.

5. (amended) A method as defined in claim 3 wherein said management message ~~cell~~ is generated in response to an increase in physical layer transport rate in excess of a second threshold value.

7. (amended) In a communication system for transporting data traffic downstream from an upstream ~~a~~ source ~~end-point to a destination end-point~~ over a path which includes a transmission link having a physical layer transport rate which is subject to variations as a function of time, a system for managing transmission of the data traffic through the system, the system comprising: monitoring means associated with the physical layer to monitor the transport rate of said link; sending means to send to said upstream source ~~end-point~~ a management message ~~cell~~ including rate information based on the monitored physical

layer transport rate; and adjusting means, at said upstream source ~~end-point~~, to adjust said transmission rate responsive to the rate information in said management message ~~cell~~.

8. (amended) A system as defined in claim 7 including means to generate said management message ~~cell~~ in response to a change in the transport rate of said physical layer transmission link.

9. (amended) A system as defined in claim 8 including means to compare said change in transport rate with a threshold value and to generate said management message ~~cell~~ only when said change exceeds said threshold value.

10. (amended) A system as defined in claim 9 having shaping means to shape said data traffic to available bit rate (ABR) category of service having resource management (RM) cells periodically carrying explicit rate information in a feed back loop to said upstream source ~~end-point~~, said system including means to insert said rate information into said RM cells.

11. (amended) In a communications system for transporting data traffic downstream from an upstream ~~a~~ source ~~end-point to a destination end-point~~ over a path which includes a transmission link having a physical layer transport rate which is subject to variations as a function of time, a method of managing transmission of the data traffic through the system, the method comprising: continually monitoring the physical layer transport rate of said transmission link; generating a management message ~~cell~~ in response to a change in said monitored physical layer transport rate which exceeds a threshold value, said management message ~~cell~~ including rate information based on said monitored transport rate; sending to said upstream source ~~end-point~~ said management message ~~cell~~; and adjusting said upstream source ~~end-point~~ transmission rate in response to the rate information in the management message ~~cell~~.

12. (amended) A method as defined in claim 11 wherein said data traffic is shaped to available bit rate (ABR) category of service having resource management (RM) cells for periodically carrying explicit rate information to said upstream source ~~end-point~~ in a feed back loop said rate information being inserted into said RM cell.

13. (amended) In a communications system for transporting data traffic downstream from an upstream ~~a~~ source ~~end-point to a destination end-point~~ over a path which includes a transmission link having a physical layer transport rate which is subject to variations as a function of time, a system for

managing transmission of the data traffic through the system, the system comprising: monitoring means for monitoring the physical layer transport rate of said link; generating means to generate a management message ~~cell~~ in response to a change in said monitored physical layer transport rate which exceeds a threshold value, said management message ~~cell~~ including information based on said monitored transport rate; means to send said management message ~~cell~~ to said upstream source ~~end-point~~; and adjusting means at said upstream source ~~end-point~~ to adjust said transmission rate in response to the rate information in the management message ~~cell~~.

14. (amended) In a communications system for transporting data traffic downstream from ~~a~~ an upstream source ~~end-point to a destination end-point~~ over a path which includes a transmission link having a physical layer transport rate which is subject to variations as a function of time, a method of managing the transmission of data traffic through the system, the method comprising: shaping a data connection from the source to the available bit rate (ABR) category of service, the ABR connection including integrated resource management (RM) cells for carrying congestion information back to said upstream source over a feedback path; monitoring the physical layer transport rate of said physical layer transmission link and recording a value derived from said monitored rate in said RM cell; returning said RM cell including the recorded value to said upstream ~~end-point~~; and adjusting by the upstream ~~end-point~~ source the transmission rate in response to the recorded value in the RM cell.

17. (amended) A method as defined in claim 16 wherein data between said upstream source and a downstream ~~said~~ destination is bi-directional.

18. (amended) A method as defined in claim 17 wherein data between said downstream destination and said upstream source for at least part of said ATM path is shaped to comply with ATM unspecified bit rate (UBR) category of service.

21. (amended) A system for managing data traffic from an upstream ~~a~~ source ~~end-point~~ to a downstream destination ~~end-point~~ over an ATM path, the ATM path including a transmission link having a variable physical layer transport rate, said system comprising: shaping means to shape said data traffic connection to comply with ATM available bit rate (ABR) category of service, said ABR connection including an integrated resource management (RM) cell for returning explicit rate (ER) congestion information to said upstream source over a feedback path; monitoring means associated with said transmission link to monitor transport rate capability of said transmission link; recording means to record

a rate value derived from said monitored transport rate capability in said RM cell; and control means in said upstream source to adjust the transmission rate of said data traffic in accordance with said transport rate information.